

PRAXAIR®

Grab 'n Go Heliox

Before using or working with the Grab 'n Go Heliox system, please read and understand the usage and safety instructions provided in this booklet.



Introduction

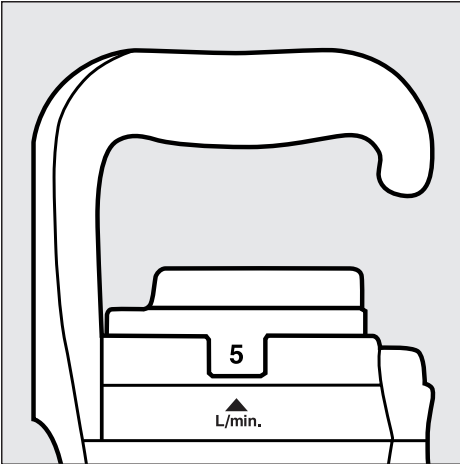
The Praxair *Grab 'n Go*® *Heliox* System provides an easy-to-use package for those who need mixtures of helium USP/oxygen (heliox) supplied from portable cylinders. It's easy to use because the regulator and pressure gauge are combined and permanently attached to the gas cylinder as one unit. This innovative design eliminates difficulties locating and attaching a separate regulator, saving you time and money.

These operating instructions will:

- (1) introduce you to the features of the *Grab 'n Go Heliox* System;
- (2) review the safety precautions for working with heliox mixtures; and
- (3) explain the setup and use of the *Grab 'n Go Heliox* System to ensure that you can use it properly and safely.

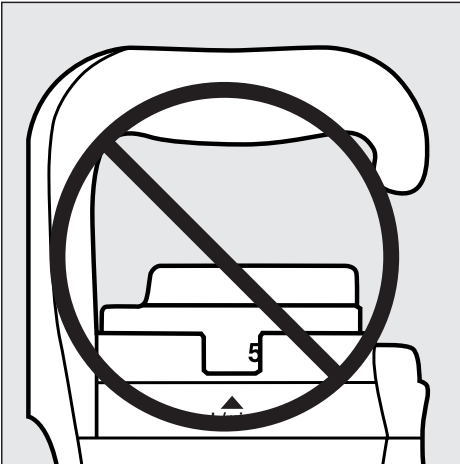
Proper Usage

Correct



The *Grab 'n Go Heliox* system operates **ONLY** when positioned at the flow rates marked on the flow-adjusting knob. The flow rates are marked in liters per minute. If the intended flow rate is not marked on the flow-adjusting knob, **DO NOT ATTEMPT TO USE THE SYSTEM**. Consult your physician for a different flow rate or a different system.

Incorrect



DO NOT OPERATE THE SYSTEM BETWEEN MARKED FLOW RATE SETTINGS. Remember heliox flows properly only when the flow-adjusting knob is stopped at one of the numbered click stops. **ALWAYS VERIFY FLOW WITH THE PATIENT'S END OF THE TUBING BEFORE APPLYING.**



Features

The *Grab 'n Go Heliox* system contains an integral regulator; a flow-adjusting knob to set the flow of heliox in clearly numbered increments; an easy-to-read gauge that displays a continuous indication of cylinder pressure; a secondary twist-to-open use port that provides a fixed nominal flow rate of 12 liters per minute that could be used to connect to a nebulizer; and a plastic housing that doubles as a convenient carrying handle.

Product Description

The *Grab 'n Go Heliox* system provides flow rates from 1 to 25 L/min and a secondary connection to supply nebulizer or other flow rate specific devices with a fixed flow rate of 12 L/min. The flow rates are calibrated for the specific Heliox mix in the *Grab 'n Go Heliox* system.

Flow Rates Available (Liters Per Minute)

Grab 'n Go Heliox										
1	3	5	6	8	10	12	15	20	25	NEB

Nebulizer Port (Liters Per Minute)

Grab 'n Go Heliox	12 (L/min)
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Maintenance

For the user, there is no special maintenance required. Flow is metered through a series of fixed orifices inside the regulator. *Grab 'n Go Heliox* systems are maintained and tested by Praxair in accordance with manufacturer's instructions.

Before using or working with this system, please read and understand the following safety information.

While it is very simple to use the *Grab 'n Go Heliox* system, remember that pressurized heliox vigorously accelerates combustion when oxygen concentration is greater than 21%. Combustibles that burn in air may burn hotter and brighter in heliox. Oil, grease, and other hydrocarbons can ignite violently (explode) in the presence of heliox.

The Praxair *Grab 'n Go Heliox* system is equipped with a pressure-reducing regulator. This unit also contains several safety features that relieve pressure if a malfunction occurs. Continuous or intermittent escape of gas from the regulator indicates a malfunction or a leak.

Here are some other precautions to keep in mind:

- Use the unit only with equipment designed and cleaned for oxygen service.
- Keep the cylinder, regulator, and connections free of oil, grease, and other hydrocarbons. **Do not lubricate!**
- Do not smoke or allow open flames in areas where medical gases are stored or in use.
- Never wrap the unit in bedcovers or carry it under clothing.
- Always turn the unit off when not in use so that heliox does not flow from the outlet.
- Do not use or store the cylinder near heat or flame. Do not expose the cylinder to direct sunlight for long periods or to any condition where temperature exceeds 130°F (54.5°C).
- Keep the unit out of reach of children.
- Store the unit indoors to protect it from temperature extremes and the elements.
- Clean cover with a clean lint-free cloth and water. **DO NOT** use flammable liquids such as alcohol to clean the unit.

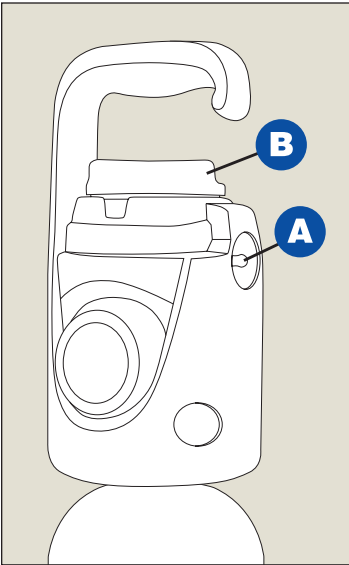
- This system is **ONLY** for use by, or on the order of, a physician. Do not activate the unit unless you have been trained in its proper functioning or are under competent supervision.
- Avoid extended use of this unit except on the advice of a physician.
- The cylinder contains high pressure U.S.P. (United States Pharmacopoeia) grade helium and oxygen.
- Never attempt to service the *Grab 'n Go Heliox* system or to remove the regulator from the cylinder. If the system malfunctions or develops a leak, turn it off immediately, place it outdoors in a safe and secure location, mark the unit as unserviceable and notify your Praxair representative.

Equipment Storage, Handling, and Setup

The *Grab 'n Go* system operates **ONLY when positioned at the flow rates marked on the flow-adjusting knob. If the intended flow is not marked on the flow-adjusting knob, **DO NOT ATTEMPT TO USE THE SYSTEM. Consult your physician for a different flow rate or a different system.****

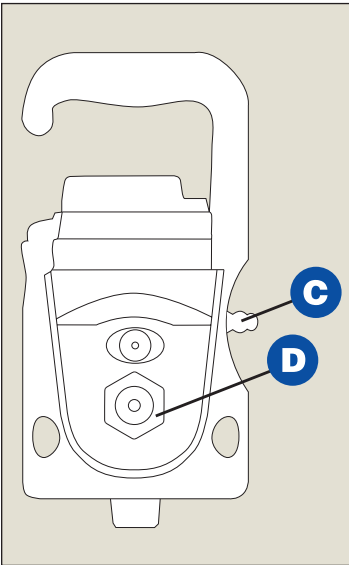
- 1.** Store *Grab 'n Go Heliox* systems indoors in a safe area where they will not fall over or be damaged by falling objects. Never store a system in an elevated location because a fall could seriously damage the regulator or cylinder. If a system is dropped or knocked over, check to see that components are not damaged and connections remain secure.
- 2.** Inspect the regulator's barbed outlet ports for physical damage, traces of dust, dirt, oil, or grease. (See diagrams on next page.) If you spot oil or grease or other contaminants or if you suspect their presence, do not use the unit. Do not attempt to remove the oil or grease or repair the unit. Notify Praxair or Praxair's representative immediately and have the system serviced by qualified personnel.
- 3.** Handle systems safely. Portable units are inherently subject to greater abuse than are stationary units. Avoid jarring or dropping the system.

Front view



A Outlet Port
B Flow-adjusting Knob

Back view



C Nebulizer Port
D Fill Port (Never Remove Cap)

4. Attach the supply tubing to the regulator's barbed outlet port (A) located in the access hole on the side of the housing. Rotate flow-adjusting knob (B) clockwise to one of the numbered click stops. Always verify flow with the patient's end of the tubing before applying. Make sure supply tubing is never folded, kinked or crushed.

5. If supplying heliox to a flow rate specific device such as a nebulizer, attach the supply tubing to the Nebulizer port (C) located 180 degrees from the outlet port. Rotate flow-adjusting knob (B) clockwise to one of the numbered click stops. Push and twist the Nebulizer port clockwise to initiate flow. Always verify flow with the patient's end and nebulizer's end of the tubing before applying. Make sure supply tubing is never folded, kinked or crushed. Both ports may be used simultaneously if any flow rate other than "NEB" is set on the flow adjusting knob (B). The "NEB" setting is used when the Outlet Port (A) is not in use and only the Nebulizer Port (C) is used instead.

Intended use

The *Grab 'n Go Heliox* system is to be used **only** at the marked liters per minute (L/min) flow rate settings. If settings other than those marked on the knob are required, do not use the *Grab 'n Go Heliox* system. Consult your physician for different flow rate or a different system.

Directions for use

1. Check the pressure gauge to ensure presence of adequate heliox contents. To turn the system on, rotate the flow-adjusting knob (B) clockwise from the OFF position. The knob has a limited range of travel, about 300 degrees. Click stops mark each flow rate to the Outlet Port (A).

Caution: Never force the flow-adjusting knob.

Warning: Do not use between the clickstops at marked flow-rate settings. If settings other than those marked on the knob are needed, do not use the *Grab 'n Go Heliox* system. Always verify flow at the patient's end of the tubing before applying.

Technical Specifications

Flow Rate:

- Main outlet: 1, 3, 5, 6, 8, 10, 12, 15, 20, 25 standard liters per minute calibrated for Heliox +/- 20% maximum.
- Secondary (nebulizer) outlet: 12 standard liters per minute +/- 15%

Delivery Pressure:

- 50 psig +/- 10 psig

Gas Composition:

- 70% Helium USP / 30% Oxygen USP +/- 1.5%

2. To turn the system off, turn flow-adjusting knob (B) counterclockwise to the OFF position. If you still hear a hissing sound, do not try to force the knob past the positive stop at the OFF position. Hissing indicates a leak. Remove the system from service, temporarily store the unit in a safe and secure location outdoors until it can be picked up by a Praxair representative. Mark the unit as unserviceable and notify your Praxair representative.

Warning: Do not attempt to use or repair a leaking system.

3. To turn the Nebulizer Port (C) “On” push and twist the port clockwise to initiate flow. Heliox will flow at a fixed rate of 12 L/min while the port is in the “On” position and the flow-adjusting knob (B) is in any position other than “Off.”

4. To turn the Nebulizer Port (C) “Off,” using your fingers, twist the port counter-clockwise until the barb stops (approximately 90 degrees). Never use pliers or other tools to open or close the Nebulizer Port (C).

Caution: Never attempt to repair any part of the regulator. Any needed system repairs must be performed by an authorized Praxair representative.

Unit replacement and refill

The high-pressure gauge visible through the plastic housing gives a continuous reading of cylinder pressure, regardless of whether heliox is flowing or not. To ensure proper functioning and an adequate supply of heliox, replace the system whenever the gauge indicates 500 pounds per square inch (psi) (3,500 kPa) or less.

The Praxair *Grab 'n Go Heliox* system must be refilled with Heliox mixture by Praxair or an authorized Praxair dealer.

Caution: Never attempt to remove the large cap (D) from the regulator’s fill port.

Recommended Reference Publications

Publication Title	Publication No.	Source
Safety Precautions and Emergency Response Planning Awareness: Oxygen, Nitrogen, Argon, Helium, Carbon Dioxide, Hydrogen, Fuel Gases	P-3499	Praxair, Inc. P.O. Box 44 Tonawanda, NY 14150-7891 Phone: 1-800-PRAXAIR
Condensed Safety Information, Compressed Gases and Cryogenic Liquids	P-12-237	
Guidelines for Handling Compressed Gas Cylinders and Cryogenic Liquid Containers	P-14-153	
Material Safety Data Sheet - Heliox	P-4638	Praxair supplier, sales representative, the Call Center (1-800-PRAXAIR), our Web site (http://www.praxair.com), or write the Praxair Tonawanda, NY address above.
Additional copies of this publication	P-15-228 B	
Safe Handling of Compressed Gases in Containers	CGA P-1	Compressed Gas Association 1725 Jefferson Davis Highway Suite 1004 Arlington, VA 22202-4102 Phone: (703) 412-0900
Accident Prevention in Oxygen-Rich and Oxygen-Deficient Atmospheres	CGA P-14	



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